

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (previously presented): A method of sputtering a tungsten film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$.

2. (previously presented): A method as claimed in claim 1 wherein the deposition takes place in a vacuum chamber with a krypton pressure of less than 10mTorr.

3. (previously presented): A method as claimed in claim 2 wherein krypton pressure is less than 6mTorr.

4. (cancelled)

5. (currently amended): A method of sputtering a tungsten film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$, and wherein the power supplied to the target is greater than about 3.5 watts per cm^2 .

6. (currently amended): A method of sputtering a tungsten film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$.

cm, and wherein the wafer is placed on a platen during deposition and the platen temperature is between 200°C and 400°C.

7. (currently amended): A method of sputtering a tungsten or tungsten-containing film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the resistivity of the tungsten film is less than 11 μohm cm, and wherein the platen is negatively DC biased.

8. (cancelled)

9. (previously presented): A method as claimed in claim 1 wherein the sputter gases further include argon.

10. (previously presented): A method as claimed in claim 9 wherein the ratio of argon to krypton or xenon is selected to minimize stress in the deposited film.

11. (cancelled)

12. (cancelled)

13. (previously presented): A method of forming a tungsten/tungsten nitride stack on a wafer including sputtering a tungsten nitride film on a wafer and sputtering a tungsten film on the tungsten nitride film wherein the two sputtering processes are performed in a single chamber using a single target, wherein the tungsten film is sputtered from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas in both of the two sputtering processes.

14. (previously presented): A method of forming a tungsten/tungsten nitride stack on a wafer including sputtering a tungsten nitride film on a wafer and sputtering a tungsten film on the tungsten nitride film wherein the two sputtering processes are performed in a single chamber using a single target, wherein the tungsten nitride film is deposited by reactive sputtering and the sputter gases include nitrogen and krypton.

15. (previously presented): A gate structure formed by the method of claim 13.

16. (new): The method of claim 13, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$.

17. (new): The method of claim 14, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$.